

## Operation, Maintenance & Replacement/Asset Management

**(Keep the following for MUNICIPAL-EPA MAJOR facilities ONLY)**

The permittee shall at all times properly operate and maintain all facilities (i.e. sewer system, treatment works, as defined in Part 41 of Act 451, 1994 as amended, and control systems) which are installed or used by the permittee to operate the treatment works and sewer system and achieve and maintain compliance with the conditions of this permit (also see Part II.D.3 of this permit). The requirements of an asset management program listed below contain goals of effective performance, adequate funding, and adequate operator staffing and training. Asset management is a planning process that ensures gaining optimum value for each asset and providing the financial resources to rehabilitate and replace them when necessary; and typically includes five core elements which identify: the current state of the asset, the desired level of service (e.g., per the permit, or for the customer), the most critical asset(s) to sustain performance, the best life cycle cost, and the long term funding strategy to sustain service and performance.

- a. The permittee shall prepare and implement an approvable Asset Management Program which addresses the following Operation, Maintenance and Replacement (OM&R)/Asset Management program requirements, 1) – 4). The permittee can choose to include the Operation and Maintenance Manual required under Part II.C.14 of this permit as part of this program. The permittee shall submit a copy of its Asset Management Plan to the Department for review and approval by **INSERT DATE: Six months from the effective date of permit**. The Asset Management Plan shall contain a schedule for the development and implementation of the OM&R/Asset Management program requirements, 1) – 4). The program shall be implemented upon approval.

1) *Maintenance Staff.* The permittee shall provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit. The level of staffing needed shall be determined by taking into account the work involved in operating the sewer system and treatment works, planning for and conducting maintenance, and complying with this permit.

2) *Collection System Map.* The permittee shall complete a map of the sewer collection system it owns and operates. The map shall be of sufficient detail and at a scale to allow easy interpretation. The collection system information shown on the map shall be based on current conditions and shall be kept up-to-date and available for review by the Department. **Please note: Items below referencing combined sewer systems are not applicable to separate sewer systems.** Such map(s) shall include but not be limited to the following:

- a) All sanitary sewer lines and related manholes;
- b) All combined sewer lines, related manholes, catch basins and CSO regulators;
- c) All known or suspected connections between the sanitary sewer or combined sewer and storm drain systems;
- d) All outfalls, including the treatment plant outfall(s), combined sewer treatment facility outfalls (RTBs), untreated CSOs, and any known SSOs;
- e) All pump stations and force mains;
- f) The wastewater treatment facility(ies), including all treatment process;
- g) All surface waters (labeled);

- h) Other major appurtenances such as inverted siphons and air release valves;
- i) A numbering system which uniquely identifies manholes, catch basins, overflow points, regulators and outfalls;
- j) The scale and a north arrow; and
- k) The pipe diameter, date of installation, type of material, distance between manholes, and the direction of flow.
- l) The manhole interior material, GPS coordinates (optional), rim elevation, and invert elevations.

3) *Inventory and assessment of fixed assets.* The permittee shall complete an inventory and assessment of operations-related fixed assets. Fixed assets are assets that are normally stationary (e.g., pumps, blowers, and buildings). The inventory and assessment shall be based on current conditions and shall be kept up-to-date and available for review by the Department. The inventory shall include the following information, a)-f):

- a) Brief description of the asset, its required capacity (e.g. pump: 120 gpm), level of redundancy for the asset, and tag number if applicable;
- b) Location of the asset;
- c) Year the asset was installed;
- d) Present condition of the asset (e.g. excellent, good, fair, poor);
- e) Depreciated value of the asset (in year \_\_\_\_\_ dollars) in accordance with approved schedules;
- f) Current asset (replacement) cost (in year \_\_\_\_\_ dollars) in accordance with approved schedules;
- g) The assessment shall consist of a "Business Risk Evaluation" that combines the probability of failure of the asset and criticality of the asset, as follows in (1)-(3):
  - (1) Rate the probability of failure of the asset on a scale of 1-5 (low to high) using criteria such as maintenance history, failure history, and remaining percentage of useful life (or years remaining);
  - (2) Rate the criticality of the asset on a scale of 1-5 (low to high) based on the consequence of failure versus the desired level of service for the facility; and
  - (3) Compute the Business Risk factor of the asset by multiplying the failure rating from (1) by the criticality rating from (2).

4) *OM&R Budget and Rate Sufficiency for the Sewer System and Treatment Works.* The permittee shall complete an assessment of its user rates and replacement fund, including the following:

- a) Beginning and end dates of fiscal year;
- b) Name of the department, committee, board, or other organization that sets rates for the operation of the sewer system and treatment works;

- c) Amount in the permittee's replacement fund for year \_\_\_\_\_ in accordance with approved schedules;
  - d) Replacement fund of all assets with a useful life of 20 years or less;
  - e) Expenditures for maintenance, corrective action and capital improvement taken during the fiscal year;
  - f) OM&R budget for the fiscal year; and
  - g) Rate calculation demonstrating sufficient revenues to cover OM&R expenses, or alternately, an implementation schedule to ensure sufficient revenues. Schedule to not extend past the expiration date of the current permit.
- b. The permittee shall submit an Annual Report that summarizes Operation, Maintenance & Replacement/Asset Management activities during the previous year and upcoming year. The report shall be submitted to the Department on or before **INSERT DATE: 30 days after the end of the permittee's fiscal year (which may differ from the Department's fiscal year)** of each year. The Annual Report shall include:
- 1) A description of the staffing levels maintained during the year;
  - 2) A description of inspections and maintenance activities conducted and corrective actions taken during the previous year;
  - 3) Expenditures for collection system maintenance activities, treatment works maintenance activities, corrective actions, and capital improvement during the previous year;
  - 4) A summary of assets/areas identified for inspection/action (including capital improvement) in the upcoming year based on core elements (and the Business Risk factors); the current state of the assets; the desired level of service, the most critical asset(s) to sustain performance; and the best life cycle cost;
  - 5) A maintenance budget and capital improvement budget for the upcoming year taking into account implementation of an effective asset management program meeting the core elements;
  - 6) An updated asset inventory based off of the original submission; and
  - 7) An updated OM&R report with updated rate schedule.